

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 20 DEC 2005

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Applicant's or agent's file reference PG6049/PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/KR2003/002855</b>	International filing date (day/month/year) <b>26 DECEMBER 2003 (26.12.2003)</b>	Priority date (day/month/year) 23 AUGUST 2003 (23.08.2003)
International Patent Classification (IPC) or national classification and IPC  <b>IPC7 B82B 3/00</b>		
Applicant  <b>JEONG, Chul-sang et al</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☒ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  <b>23 MARCH 2005 (23.03.2005)</b>	Date of completion of this report  06 DECEMBER 2005 (06.12.2005)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  LEE, SI GEUN  Telephone No. 82-42-481-8151 

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/002855

## 1. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/002855

### II. Priority

1. ☐ This opinion has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☐ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).
  - ☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☒ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1).

Thus for the purpose of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

The present application is claimed based on the application KR 10-2003-0058489 which has been claimed based on the prior application KR 10-2002-0050240 for the purpose of claiming a right of national priority. The priority claim of the subsequent application can be acknowledged, only if the previous application claiming the same subject matter has been withdrawn, abandoned, or refused without having been laid open to public inspection, and has not yet served as a basis for claiming a right of priority, at the time of filing the subsequent application. However the previous application of the present application, KR 10-2003-0058489 is based on KR 10-2002-0050240 for the purpose of claiming a right of national priority. Thus the priority claim of the present application cannot be acknowledged.

# INTERNATIONAL PRELIMINARY EXAMINATION

International application No.  
PCT/KR2003/002855

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1 - 16	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 10, 12, 13, 15, 16	YES
	Claims	11, 14	NO
Industrial applicability (IA)	Claims	1 - 16	YES
	Claims		NO

### 2. Citations and explanations (Rule 70.7)

The following document has been considered for the purpose of this report.

D1 = KR 2003-0075229 A(26 September 2003)

The present invention relates to a method for preparing nanocomposite solution, comprising the steps of preparing basic silica colloid aqueous solution; providing an electrolysis apparatus by installing a negative electrode containing aluminum and a positive electrode containing silver into the basic silica colloid aqueous solution; and forming nanocomposite by applying voltage to the respective electrodes, and said nanocomposite solution.

D1 relates a nano-composite emulsion composition comprising a water dispersible polyurethane nano-composite emulsion, an organic UV protecting agent and a silver colloid.

#### I. Novelty and Inventive Step

None of the prior art documents including D1 teaches or suggests the subject matter of claims 1-16 of the present invention. Thus these claims are novel.

Claims 11 and 14 claim nanocomposite including silver particles with a size between 1 - 10 nm and silica particles with a size ranged 3 - 50nm; and nanocomposite solution including said nanocomposite and dispersion media. However D1 discloses a nano-composite emulsion composition including colloidal silica with a size ranged 10 - 100nm and silver colloid. Thus claims 11 and 14 are considered to be easily invented from D1. Therefore the above claims are not inventive.

#### II. Industrial Applicability

There is no reason for forming a negative opinion about the industrial applicability of this invention. Consequently, claims 1 - 16 appear to meet the requirement of PCT Article 33(4).